Trends: U.S. Spending For Mental Health and Substance Abuse Treatment, 1991–2001 the Decline in Receipt of Substance Abuse Treatment by the Privately Insured, 1992-2001

Public payers bear a growing share of spending for mental illness and substance abuse treatment.

Tami L. Mark, Rosanna M. Coffey, Rita Vandivort-Warren, Hendrick J. Harwood, Edward C. King, and the MHSA Spending Estimates Team

Tami Mark (Tami.Mark@thomson.com) is associate director, outcomes research and econometrics, at Medstat in Washington, D.C.; Rosanna Coffey is a Medstat vice president. Rita Vandivort-Warren is a senior policy analyst at the Center for Substance Abuse Treatment, Substance Abuse and Mental Health Services Administration (SAMHSA), in Rockville, Maryland. Hendrick Harwood is a vice president of the Lewin Group in Falls Church, Virginia. Edward King is a research analyst at the Actuarial Research Corporation in Columbia, Maryland. Members of the MHSA Spending Estimates Team are acknowledged at the end of the paper.

An estimated 28–30 percent of the adult U.S. population suffers from a mental or substance use disorder during the course of a year. About 5–7 percent of adults have a serious mental illness.[1] A similar percentage of children—about 5–9 percent— has a serious emotional disturbance.[2] Of the ten leading causes of disability worldwide in 2000 for people ages 15–44, four are psychiatric conditions and alcohol abuse.[3] Given the prevalence of morbidity and mortality related to mental health and substance abuse (MHSA) disorders and their wider societal impacts, it is important to know how much the United States is investing in treatment of these conditions. Moreover, because of the rapid changes occurring in treatment technologies, philosophy, organization, and financing, the extent and character of this investment should be tracked over time.

This paper addresses the following key questions: (1) How much was spent in the United States to provide MHSA treatment in 2001? (2) How were the expenditures for MHSA distributed by payer and provider type? (3) How did spending change from 1991 to 2001? (4) How did MHSA spending compare with spending for all U.S. health care? The paper is part of an ongoing effort by the Substance Abuse and Mental Health Services Administration (SAMHSA) to estimate what the United States spends on MHSA treatment.

Study Data and Methods

The approach we took to estimate national MHSA spending was designed to be consistent with the National Health Accounts (NHA). The NHA constitutes the framework from which the estimates of spending for all health care are constructed by the Centers for Medicare and Medicaid Services (CMS). The framework can be seen as a

two-dimensional matrix: Along one dimension are health care providers or products that constitute the U.S. health care industry; along another are sources of funds used to purchase health care.

Spending estimates

Two basic methods were used to estimate MHSA treatment spending, depending on provider or service type. The first method relied on SAMHSA's national surveys of specialty MHSA organizations: the Survey of Mental Health Organizations (SMHO), formerly the Inventory of Mental Health Organizations (IMHO), and The National Survey of Substance Abuse Treatment Services (N-SSATS), formerly the Uniform Facilities Data Set (UFDS). Surveys were not available for every year during 1991–2001. The most salient data gap was the unavailability, at the time these estimates were made, of data about MH specialty facility care for 1999– 2001. In addition, the N-SSATS did not have revenue data for 1999–2001. Missing years of data were projected or imputed based on facility characteristics such as size.

The second basic method carved out MHSA spending from the NHA. Services and providers not fully covered in the N-SSATS or SMHO but covered in the NHA were general hospital non-specialty units, physicians, other professionals, retail prescription drugs, nursing homes, and home health agencies. We based the estimates for these services on CMS estimates of total spending by provider and payer. A proportion of that total spending was allocated to MHSA using numerous data sets, mainly public-use, nationally representative, provider-based survey data, such as the National Ambulatory Medical Care Survey (NAMCS) and the Healthcare Cost and Utilization Project (HCUP), Nationwide Inpatient Sample. Allocations to MHSA typically involved first determining the proportion of total service use that involved a primary MHSA disorder, then adjusting for differences in average charges, cost sharing, and discounts between MHSA and all other diagnoses. The two methods were integrated by adding up spending by provider and payer after accounting for duplication across data sources.

Providers

The provider categories are specialty psychiatric and substance abuse hospitals, general hospital specialty units, non-specialty care in general hospitals, psychiatrists, non-psychiatrist physicians, other non-physician independent professionals, multi-service mental health organizations, specialty substance abuse centers, freestanding nursing homes, freestanding home health agencies, and retail prescription drugs. Although their definition has differed across SAMHSA surveys, multi-service mental health organizations generally are any facility that provides a variety of MH services and that is not hospital based. Similarly, specialty SA centers are generally clinics and residential treatment centers that specialize in chemical dependency.

Payers

The payer categories are Medicare, Medicaid, other state and local government sources, and other federal sources (such as Veterans Affairs, Department of Defense, and federal block grants), private insurance, out-of-pocket, and other private sources (such as philanthropy).

Location

Expenditures are also divided into inpatient, residential, and outpatient. Some providers, such as hospitals, offer all three types of services. Other providers, such as nursing homes, are considered to only offer one type. Pharmaceuticals are classified with outpatient expenditures.

MHSA Disorders

To define MHSA disorders, we relied on diagnostic codes found in the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) as "mental disorders" (codes in sections 290– 319). These codes exclude "cerebral degenerations" (such as Alzheimer's disease). After consulting with a panel of MHSA experts, we also excluded several other codes related to dementia, as well as developmental delays and tobacco abuse. The allocation to MHSA was based on principal or primary diagnoses. Clearly, the spending estimates would be higher if secondary diagnoses were also captured; this was outside the scope of this study.

The diagnostic categories selected generally reflect what payers consider as MHSA conditions. They exclude costs not directly related to treatment, such as costs stemming from lower productivity and drug-related crimes. They also exclude spending on non-MHSA conditions that are caused by MHSA problems, such as liver cirrhosis.

The only service category that was not allocated to MHSA based on diagnoses is retail prescription drugs. Because national data do not include the diagnosis that led to the prescription, expenditures were considered for MHSA treatment if the medication's primary indication was an MHSA disorder.

Study Results

Spending in 2001

In 2001, $104 billion was spent on MHSA treatment in the United States (Exhibit 1). To put this number in perspective, it is useful to compare it with national spending on health care for all types of conditions. Total personal health care expenditures were $1.4 trillion in 2001, of which MHSA spending accounted for 7.6 percent. Of total MHSA spending, $85 billion (82 percent) was for mental health (MH), and $18 billion (18 percent) was for SA in 2001.

Spending in 2001 by payer

Private payers covered 35 percent and public payers covered 65 percent of total MHSA spending in 2001 (Exhibit 2). More specifically, for private payers, private insurance accounted for 20 percent of total MHSA spending, out-of-pocket payment accounted for 12 percent, and other private payment such as charity care accounted for 3 percent. Among public payers, Medicaid paid for 26 percent of total MHSA spending, other state and local governments paid for 26 percent, Medicare accounted for 7 percent, and other federal government payers such as block grants and Veterans Affairs paid for 6 percent. If one allocated Medicaid to the federal and state share, federal spending accounted for 28 percent of total MHSA spending, and state spending equaled 37 percent.

EXHIBIT 1. Spending for Mental Health and Substance Abuse (MHSA) and All Health, Millions of Dollars, by Provider Type, Service Type, and Payer, Calendar Years 1991 and 2001

	MHSA		MH		SA		All Health	
	1991	2001	1991	2001	1991	2001	1991	2001
Provider type—total	60,327	103,705	48,891	85,441	11,436	18,264	734,558	1,372,553
Total care	57,467	97,285	46,575	80,055	10,892	17,229	694,475	1,282,813
Hospitals	24,097	29,171	19,451	23.097	4,646	6,074	279,485	451,220
General	11,382	17,518	8,050	13,362	3,332	4,156	262,515	435,221
General, specialty units	8,200	9,019	5,837	5,928	2,362	3,091	–[a]	–[a]
Community, nonspecialty care	3,182	8,499	2,213	7,434	969	1,065	–[a]	–[a]
Specialty	12,715	11,653	11,401	9,735	1,314	1,918	16,970	15,999
All physicians	6,943	12,144	6,313	11,255	631	889	175,003	313,649
Psychiatrists	4,893	8,560	4,633	8,128	261	432	–[a]	–[a]
Nonpsychiatrists	2,050	3,584	1,680	3,128	370	457	–[a]	–[a]
Other professionals	5,625	8,072	4,488	6,714	1,137	1,358	19,694	42,333
Freestanding nursing homes	5,823	5,806	5,683	5,538	140	268	58,314	98,911
Freestanding home health	260	668	256	657	4	10	14,879	33,168
Retail prescription drugs	3,690	17,909	3,666	17,830	24	78	44,892	140,574
Other personal and public health	11,030	23,515	6,719	14,963	4,311	8,552	102,208	202,958
Multiservice MH organizations	7,306	16,337	6,719	14,963	587	1,374	–[a]	–[a]
Specialty SA centers	3,724	7,178	–[a]	–[a]	3,724	7,178	–[a]	–[a]
Insurance administration	2,860	6,421	2,316	5,386	544	1,035	40,083	89,740
Service type—total	60,327	103,705	48,891	85,441	11,436	18,264	734,558	1,372,553
Inpatient	24,040	24,377	18,805	18,856	5,235	5,521	–[a]	–[a]
Outpatient	21,831	51,882	18,516	44,556	3,315	7,327	–[a]	–[a]
Residential	11,597	21,025	9,254	16,644	2,343	4,382	–[a]	–[a]
Insurance administration	2,860	6,421	2,316	5,386	544	1,035	40,083	89,740
Payer—total	60,327	103,705	48,891	85,441	11,436	18,264	734,559	1,372,554
Private	25,316	36,276	21,022	31,806	4,295	4,470	429,786	759,431
Out of pocket	8,554	12,266	7,537	10,867	1,017	1,399	142,133	205,497
Private insurance	13,371	21,105	10,625	18,658	2,746	2,446	253,899	496,103
Other private	3,391	2,905	2,859	2,281	532	625	33,754	57,831
Public	35,011	67,429	27,869	53,636	7,142	13,794	304,773	613,123
Medicare	3,657	7,178	3,247	6,272	411	906	120,913	241,884
Medicaid	10,795	26,738	9,238	23,357	1,557	3,381	93,241	225,511
Other federal	4,515	6,557	2,339	3,984	2,176	2,574	32,454	56,308
Other state and local	16,043	26,957	13,045	20,023	2,998	6,934	58,165	89,420
Total spending per capita (U.S. population)	$237	$367	$192	$302	$45	$65	$2,890	$4,851
MHSA spending share of all health spending	8.2%	7.6%	6.7%	6.2%	1.6%	1.3%	–[a]	–[a]

SOURCE: Substance Abuse and Mental Health Services Administration, 2004.
[a]Not applicable.

Because 82 percent of MHSA spending was for MH treatment, the spending patterns were driven by MH spending. SA spending was more heavily weighted toward public payers (76 percent) than was MH spending (63 percent). This compares to 45 percent for all health care spending (Exhibit 2).

Among public payers, federal sources other than Medicare and Medicaid ("other federal") paid for a larger share of SA treatment (14 percent) in comparison to MH treatment (5 percent). In addition, other state and local governments also paid for a greater proportion of SA spending (38 percent) than MH (23 percent). Medicaid paid a lower proportion of spending for SA (19 percent) than for MH (27 percent).

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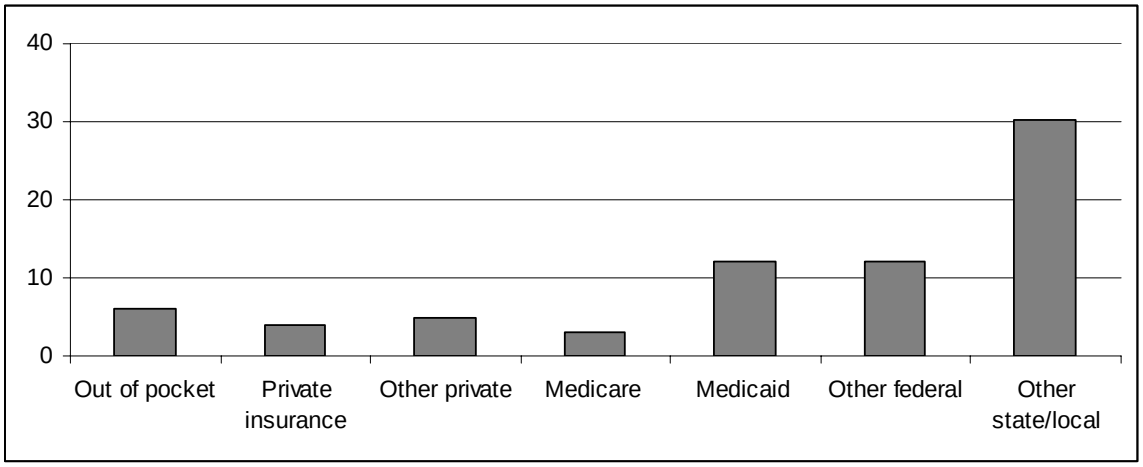
EXHIBIT 2. Percentages Spent for Mental Health and Substance Abuse (MHSA) and All Health Care, by Provider Type, Service Type, and Payer, Calendar Years 1991 And 2001

	MHSA		MH		SA		All Health	
	1991	2001	1991	2001	1991	2001	1991	2001
Provider type—total								
Total care	95%	94%	95%	94%	95%	94%	95%	93%
Hospitals	40	28	40	27	40	34	38	33
General	19	17	16	16	29	23	36	32
General, specialty units	14	9	12	7	21	17	–[a]	–[a]
Community, nonspecialty care	5	8	5	9	8	6	–[a]	–[a]
Specialty	21	11	23	11	11	11	2	1
All physicians	12	12	13	13	6	5	24	23
Psychiatrists	8	8	9	10	2	2	–[a]	–[a]
Nonpsychiatrists	3	3	3	4	3	3	–[a]	–[a]
Other professionals	9	8	9	8	10	7	3	3
Freestanding nursing homes	10	6	12	6	1	1	8	7
Freestanding home health	0	1	1	1	0	0	2	2
Retail prescription drugs	6	17	7	21	0	0	6	10
Other personal and public health	18	23	14	18	38	47	14	15
Multiservice MH organizations	12	16	14	18	5	8	–[a]	–[a]
Specialty SA centers	6	7	–[a]	–[a]	33	39	–[a]	–[a]
Insurance administration	5	6	5	6	5	6	5	7
Service type—total								
Inpatient	40	24	38	22	46	30	–[a]	–[a]
Outpatient	36	50	38	52	29	40	–[a]	–[a]
Residential	19	20	19	19	20	24	–[a]	–[a]
Insurance administration	5	6	5	6	5	6	–[a]	–[a]
Payer—total								
Private	42	35	43	37	38	24	59	55
Out of pocket	14	12	15	13	9	8	19	15
Private insurance	22	20	22	22	24	13	35	36
Other private	6	3	6	3	5	3	5	4
Public	58	65	57	63	62	76	41	45
Medicare	6	7	7	7	4	5	16	18
Medicaid	18	26	19	27	14	19	13	16
Other federal	7	6	5	5	19	14	4	4
Other state and local	27	26	27	23	26	38	8	7

SOURCE: Substance Abuse and Mental Health Services Administration, 2004.
[a]Not applicable.

The proportion of overall health spending accounted for by MHSA is widely divergent among payers (Exhibit 3). MHSA accounted for 30 percent of total other state and local spending and 12 percent of Medicaid funds— but only 3 percent of Medicare funds. MHSA accounted for 4 percent of all health spending covered by private insurance. SA treatment accounted for a smaller percentage of each payer's share than MH treatment did.

EXHIBIT 3. Percentage of Overall Health Care Spending Devoted to Mental Health and Substance Abuse (MHSA), by Payer, 1991-2001



SOURCE: Substance Abuse and Mental Health Services Administration, 2004.

Spending in 2001 by provider

Hospitals accounted for 28 percent of spending on MHSA (Exhibit 2) in 2001, and most of that occurred in general hospitals. Specifically, general non-specialty hospitals represented 17 percent, and specialty psychiatric and SA hospitals, 11 percent. Within general hospitals, about 51 percent of spending took place in specialty units, and the remaining 49 percent occurred in other types of medical care units— that is, in "scatter beds" distributed among other hospital beds (data not shown).

Multi-service mental health organizations such as mental health clinics accounted for about 16 percent of all MHSA treatment spending; specialty SA centers accounted for about 7 percent. However, specialty SA centers received the single largest share of SA expenditures: 39 percent. Retail prescription drugs accounted for 17 percent of total MHSA spending, the vast majority of this going for MH rather than SA treatment. Physicians accounted for 12 percent, and other professionals such as psychologists, counselors, and social workers accounted for 8 percent. Freestanding nursing homes accounted for 6 percent, and freestanding home health agencies accounted for only 1 percent.

Physicians and other professionals played a much larger fiscal role in MH treatment than in SA treatment. While 21 percent of MH dollars went to physicians and other professionals, only 12 percent of SA dollars did so. The difference was most notable for psychiatrists: 10 percent of MH spending was for psychiatrists, compared with only 2 percent of SA spending. Specialty clinics played a greater role in SA treatment; 39 percent of SA expenditures occurred in specialty SA centers, while 18 percent of MH expenditures occurred in multi-service MH organizations. Retail medications accounted for about one-fifth of MH spending and totaled approximately $18 billion, while they accounted for less than 1 percent of total SA spending and less than $100 million.

Trends, 1991–2001

MHSA spending rose from $60 billion in 1991 to $104 billion in 2001 (Exhibit 1). The nominal MHSA growth rate from 1991 to 2001 was 5.6 percent annually, compared with a rate of 6.5 percent for all health care spending (Exhibit 4). Inflation adjusted MHSA growth was 3.5 percent, compared with 4.4 percent for all health care spending (calculated using the gross domestic product [GDP] deflator, data not shown). The average annual growth rate was 5.7 percent for MH and 4.8 percent for SA. Because MHSA spending grew slightly below all health spending, MHSA spending as a proportion of all health spending declined from 8.2 percent in 1991 to 7.6 percent in 2001 (data not shown).

EXHIBIT 4. Average Annual Growth Rates For Mental Health and Substance Abuse (MHSA) and All Health Spending, by Provider Type, Service Type, and Payer, 1991–2001

	MHSA	MH	SA	All Health
Provider type—total	5.6%	5.7%	4.8%	6.5%
Total care	5.4	5.6	4.7	6.3
Hospitals	1.9	1.7	2.7	4.9
General	4.4	5.2	2.2	5.2
General, specialty units	1.0	0.2	2.7	–[a]
Community, nonspecialty care	10.3	12.9	0.9	–[a]
Specialty	–0.9	–1.6	3.9	–0.6
All physicians	5.7	6.0	3.5	6.0
Psychiatrists	5.8	5.8	5.2	–[a]
Nonpsychiatrists	5.7	6.4	2.1	–[a]
Other professionals	3.7	4.1	1.8	8.0
Freestanding nursing homes	0.0	–0.3	6.7	5.4
Freestanding home health	9.9	9.9	9.8	8.3
Retail prescription drugs	17.1	17.1	12.6	12.1
Other personal and public health	7.9	8.3	7.1	7.1
Multiservice MH organizations	8.4	8.3	8.9	–[a]
Specialty SA centers	6.8	–[a]	6.8	–[a]
Insurance administration	8.4	8.8	6.6	8.4
Service type—total	5.6	5.7	4.8	6.5
Inpatient	0.1	0.0	0.5	–[a]
Outpatient	9.0	9.2	8.3	–[a]
Residential	6.1	6.0	6.5	–[a]
Insurance administration	8.4	8.8	6.6	8.4
Payer—total	5.6	5.7	4.8	6.5
Private	3.7	4.2	0.4	5.9
Out of pocket	3.7	3.7	3.2	3.8
Private insurance	4.7	5.8	–1.1	6.9
Other private	–1.5	–2.2	1.6	5.5
Public	6.8	6.8	6.8	7.2
Medicare	7.0	6.8	8.2	7.2
Medicaid	9.5	9.7	8.1	9.2
Other federal	3.8	5.5	1.7	5.7
Other state and local	5.3	4.4	8.7	4.4
Total spending per capita (U.S. population)	4.4	4.6	3.7	5.3

SOURCE: Substance Abuse and Mental Health Services Administration, 2004.
[a]Not applicable.

From 1991 to 1996, MHSA spending growth lagged behind that of all health care by 1.7 percentage points (4.8 percent for MHSA versus 6.5 percent for all health, data not shown).[4] From 1996 to 2001, the MHSA growth rate was close to that of all health (6.3 percent for MHSA versus 6.4 percent for all health). The higher MHSA growth rate in the second half of the ten-year series is almost entirely attributable to spending on prescription drugs. If prescription drugs are excluded, the MHSA growth rate was 4.3 percent from 1991 to 1996 and 4.2 percent from 1996 to 2001.

What contributed to MH spending growth over this period? Although this study does not track information on the volume of services received, other studies indicate that the number of people being treated for MH disorders has risen over time.[5] For example, Samuel Zuvekas reports that in 1987, 6.9 percent of the U.S. population used MHSA services, while in 2001, 10.7 percent did so.[6]The increase in use is largely driven by the increase in people treated with psychotropic drugs.

Payer trends

Public financing grew to be a more important source of financing for both MH and SA treatment during the decade. Public payers accounted for 57 percent of total MH spending in 1991 and 63 percent in 2001. Public payers rose from accounting for 62 percent of SA spending in 1991 to 76 percent in 2001 (Exhibit 2).

The gap in the growth rate between public and private payers over the ten-year period occurred primarily during the first five years (data not shown). From 1991 to 1996, private MHSA spending grew 1.1 percent per year, while public spending grew 7.2 percent. During the 1996–2001 period, private and public MHSA spending each rose by 6.3 percent annually. This pattern may stem in part from the imposition of cost containment in the private sector through managed care during the first half of the period, which later moderated.[7] In addition, Medicaid and Medicare experienced sizable enrollment increases over the time period; reasons for this include the expansion in populations served and the growth of Social Security Disability Insurance (SSDI) and Supplemental Security Income (SSI) enrollment by people with mental illness.

For substance abuse, the difference between public- and private-sector growth rates was even greater and existed during both the first and second parts of the series. During the first five years, private insurance spending for SA fell 2.4 percent annually; during the second five years, it increased only 0.1 percent annually. In contrast, public payers' spending on SA treatment rose 8.3 percent in the first five years and 5.4 percent in the second five years.

As a result of these growth-rate disparities, public payers became an even more important source of funding for MHSA treatment, and the role of private payers diminished. In 1991, public payers accounted for 58 percent of total MHSA spending; in 2001 they accounted for 65 percent (Exhibit 2). Among public payers, Medicaid grew in importance to become the largest payer of MHSA treatment (Exhibit 2). Medicaid (the combined federal and state share) rose from 18 percent of total MHSA spending in 1991 to 26 percent in 2001. Medicaid SA spending rose from 14 percent to 19 percent, and Medicaid MH spending, from 19 percent to 27 percent. In contrast, other state and local government funding for MHSA dropped a single percentage point. For SA, other state

and local funding expanded from 26 percent of total SA dollars in 1991 to 38 percent in 2001.

Private payments consist of private insurance, out-of-pocket spending, and other private sources (such as philanthropy). Private insurance spending on MHSA care grew at a slower rate than such spending on all health care (4.7 percent versus 6.9 percent) (Exhibit 4). However, during the first five years, private insurance MHSA spending grew at 2.5 percent annually—much slower than all health spending at 6.3 percent annually. During the second five years, MHSA spending was closer to all health spending (6.9 versus 7.6 percent per year, respectively; data not shown). These MHSA trends are dominated by MH.

Out-of-pocket spending on MHSA care grew at almost the same rate as that on all health care (Exhibit 4). The growth rate accelerated from –0.6 percent during the first half of the period to 8.2 percent during the second half (data not shown). This may be rooted in increases in cost sharing for retail prescription drugs. Although out-of-pocket spending grew, the percentage of MHSA spending coming from out-of-pocket sources declined from 1991 to 2001 (Exhibit 2). Such a decrease has been found for all health spending and in other MHSA spending studies.

Service trends

Between 1991 and 2001, inpatient spending on all types of providers reporting inpatient services declined from 40 percent to only 24 percent of MHSA spending (Exhibit 2). The mix of services shifted to retail prescription drugs, which increased from 6 percent of total MHSA spending in 1991 to 17 percent in 2001.

Total MHSA spending grew $43 billion between 1991 and 2001. The largest component of this change, retail prescription drugs, contributed 33 percent of the $43 billion increase (data not shown). The next-largest component, multi-service mental health organizations, accounted for 21 percent of the increase.

The role of hospitals in providing treatment for MHSA disorders has been declining. In 1991, 40 percent of MHSA spending was for hospital-based services, compared with 28 percent in 2001 (Exhibit 2). General hospitals' MHSA spending grew 4.4 percent annually, primarily because of increases in outpatient use and spending. General hospitals' growth rates were 5.2 percent for MH and 2.2 percent for SA. In comparison, hospital-based spending for all of health care rose 4.9 percent annually (Exhibit 4). Psychiatric and SA specialty hospital spending fell 0.9 percent annually. In contrast to general hospitals, MH spending in psychiatric hospitals fell 1.6 percent, and SA spending there rose 3.9 percent.

The fastest-growing component of MHSA spending was retail prescription drugs, which increased 17.1 percent annually during the study period. In comparison, prescription drug spending for all of health care increased 12.1 percent annually (Exhibit 4).

Physician spending on MHSA treatment grew 5.7 percent annually—almost equal to the physician spending increases in all of health care (Exhibit 4). Psychiatrist and non-psychiatrist spending grew at essentially the same rates. Physician spending on MH treatment increased 6 percent annually, compared with a 3.5 percent increase for SA treatment. MHSA spending on other independent professionals grew 3.7 percent,

compared with 8 percent for other professionals' spending on all health care. For MH the growth rate was 4.1 percent; for SA it was 1.8 percent.

The proportion of spending accounted for by nursing homes declined over the ten-year period, from 10 percent of spending in 1991 to 6 percent in 2001 (Exhibit 2). Nursing homes' MHSA spending did not grow at all from 1991 to 2001, in contrast to that for all health care, which grew 5.4 percent annually (Exhibit 4). The decline might have been influenced by a federal law implemented in 1992, which requires people seeking admission to Medicaid certified nursing homes to be screened before admission, to determine if they are mentally ill or mentally retarded. This is intended to prevent people who primarily need treatment for these conditions from being placed in nursing homes. Spending for MHSA conditions that are nursing home residents' secondary diagnoses are not considered in these estimates, nor are Alzheimer's disease and other dementias.

Specialty substance abuse centers were one of the fastest-growing components of SA providers, growing 6.8 percent annually (Exhibit 4). They accounted for 51 percent of the increase in SA spending over the time period (calculated from data in Exhibit 1). Spending for MH and SA treatment provided by multi-service mental health organizations grew rapidly at 8.3 percent (MH) and 8.9 percent (SA).

Discussion

MHSA spending accounts for a sizable portion of the health care economy: $104 billion out of a total of $1.4 trillion in 2001. This represents a substantial investment in treatment. One analysis estimates that more than thirty million Americans reported receiving MHSA treatment in 2001.[8] This paper highlights a number of important trends in overall MHSA growth rates and changes by payer, provider, and type of care. Two of the most important developments common to both MH and SA are the decline in inpatient spending and the shift to publicly financed care. One pattern specific to MH is the growth in spending on prescription drugs.

Inpatient declines

In nominal dollars, inpatient spending for MH and SA remained essentially constant between 1991 and 2001, falling in real dollars and as a proportion of total health spending. Analyses of several other data sources have found that lengths-of-stay have been declining dramatically over time. Studies are more equivocal about whether admission rates have also declined.[9]

This decrease in the proportion of care being provided in hospital settings is primarily caused by reduced care in specialty psychiatric hospitals, which stems from several causes. First, for many years states have been reducing beds or closing public psychiatric hospitals and instead relying on community services. For example, in 1990 there were 735 psychiatric hospitals with 143,660 beds in the United States; by 1998 there were only 557 psychiatric hospitals and 97,168 beds.[10] Second, managed care has been shown to reduce the use of inpatient services, through prior approval for inpatient admission, utilization review to shorten inpatient stays, and payments limited to a fixed number of days of care. Third, pharmaceutical advances over the past fifty years have led to less reliance on inpatient facilities. The increased use of psychotropic medications, for

example, has reduced patients' symptoms more quickly and thus enabled more treatment in outpatient settings.

Within general hospitals, there has also been a movement away from specialty units toward non-specialty unit care or "scatter beds." One question raised by these trends is what impact the increased provision of acute inpatient services and treatment in less specialized settings has on access to specialty services and the quality of clinical care.

Shift to public payers

MHSA public spending growth outpaced private insurance growth during 1991–1996. This pattern stems, in part, from the imposition of cost containment in the private sector through managed care during the first half of the period, which later moderated.[11]

For MH in particular, the shift to public providers has largely represented a shift to greater Medicaid spending. In 2001, Medicaid was the single largest payer of MH care, totaling $27 billion or more than one-quarter of all MH spending. As dollars shift toward Medicaid and away from state and local programs, care for disabled and low-income mentally ill people is increasingly being provided through an insurance model, not a community model.[12] More attention needs to be paid to this trend and its consequences, including effects on areas such as the organization of state government agencies, data systems and performance measurement, and coordination across programs and providers.[13]

For substance abuse, the difference between public- and private-sector growth rates was even greater and existed during both parts of the study series. During the first five years, private insurance spending for SA fell 2.4 percent annually; during the second five years, it grew only 0.1 percent annually. This trend clearly raises questions as to why SA spending under private insurance is not keeping pace with inflation. It cannot be explained by a change in SA benefits. According to the U.S. Bureau of Labor Statistics, in both 1991 and 1997 most firms offered such benefits. The change in SA spending may be attributable to the growth in managed care, which can have a dramatic effect on SA treatment.[14] Another implication is that given the state's role in determining Medicaid and state and local SA spending, states control the majority of SA spending.

Prescription drugs

The largest component of the increase in MH spending over the study period was the growth of prescription drugs. The largest category of prescription medications are antidepressants, which accounted for more than half of MHSA drug spending in the study period. Anti-psychotics made up 22 percent of total MHSA drugs, anti-anxiety drugs accounted for 13 percent, and other MHSA drugs accounted for 12 percent. Prescription drug spending growth stems from a combination of increased use of and higher prices for medications. During the time period, a number of new psychotropic medications came onto the market. In addition, more people began taking MHSA drugs.[15]

National spending analyses provide a bird's-eye view of the MHSA system. Their strength comes from their ability to portray broad trends in types of services provided, providers furnishing those services, financing, and specialty/non-specialty concentrations. Aggregate analysis helps to identify issues and focus attention on important trends.

However, such analysis is not designed to address underlying causal factors; this is best left to studies designed to test cause and effect. Studies of the MHSA system with more detailed data on specific types of providers and payers can complement and inform the spending data. With both types of studies, one can begin to develop a clearer understanding of the complex and evolving MHSA treatment system. This knowledge can aid in developing strategies for improving the quality of and access to care for this vulnerable segment of the population.

The MHSA Spending Estimates Team consists of Tami Mark, Rosanna Coffey, Rita Vandivort-Warren, Jeffrey Buck, Joan Dilonardo, Hendrick Harwood, Ellen Bouchery, David McKusick, Edward King, and James Genuardi. A contract from the Substance Abuse and Mental Health Services Administration (SAMHSA) supported preparation of this paper. The content is solely the responsibility of the authors and does not necessarily reflect the official views of SAMHSA, its components CSAT or CMHS, or the Department of Health and Human Services.

Notes

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[2]R.M. Friedman et al., "Prevalence of Serious Emotional Disturbance in Children and Adolescents," in *Mental Health, United States, 1996*, ed. R.W. Manderscheid and M.A. Sonnenschein (Washington: U.S. Government Printing Office, 1996), 71–78.

[3]World Health Organization, *World Health Report 2001, Mental Health: New Understanding, New Hope*, www.who.int/whr/2001/en (7March 2005).

[4]The full report on these spending figures is available from the authors on request; send e-mail to Tami.Mark@thomson.com.

[5]R.C. Kessler et al., "The Epidemiology of Major Depressive Disorder: Results from the National Comorbidity Survey Replication (NCS-R)," *Journal of the American Medical Association* 289, no. 23 (2003): 3095–3105; S.H. Zuvekas, "Prescription Drugs and the Changing Patterns of Treatment for Mental Disorders, 1996–2001," *Health Affairs* 24, no. 1 (2005): 195–205; S.H Zuvekas, "Trends in Mental Health Services Use and Spending, 1987–1996," *Health Affairs* 20, no. 2 (2001): 214– 224; and M. Olfson et al., "National Trends in the Outpatient Treatment of Depression," *Journal of the American Medical Association* 287, no. 2 (2002): 203–209.

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[7]K. Levit et al., "Trends inU.S.HealthCare Spending, 2001," *Health Affairs* 22, no. 1 (2003): 154–164.

[8]Zuvekas, "Prescription Drugs."

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[11]Levit et al., "Trends."

[12]J.A. Buck, "Medicaid, Health Care Financing Trends, and the Future of State-based Public Mental Health Services," *Psychiatric Services* 54, no. 7 (2003): 969–975.

[13]Ibid.; and T.L. Mark et al., "Medicaid Expenditures on Behavioral Health Care," *Psychiatric Services* 54, no. 2 (2003): 188–194.

[14]M. Rosenbach and T. Lake, "Mental Health and Substance Abuse Parity in Vermont: What Did We Learn?" Issue Brief no. 1 (Washington: Mathematica Policy Research, September 2001); and D.S. Shepard et al., "Managed Care and the Quality of Substance Abuse Treatment," *Journal of Mental Health Policy and Economics* 5, no. 4 (2002): 163–174.

[15]Zuvekas, "Prescription Drugs"; Zuvekas, "Trends"; and Olfson et al., "National Trends."